

BEFORE THE PUBLIC UTILITY COMMISSION OF TEXAS

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PROJECT NO. 14929

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COMMENTS ON UNIVERSAL SERVICE
OF THE OFFICE OF PUBLIC UTILITY COUNSEL,
CONSUMERS UNION SOUTHWEST REGIONAL OFFICE,
AMERICAN ASSOCIATION OF RETIRED PERSONS,
AND TEXAS LEGAL SERVICES

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I. INTRODUCTION

A. THE COMMENTORS

These comments are provided on behalf of a broad range of consumer groups representing residential customers, lower income households, and older Americans. The Office of Public Utility Counsel, Consumers Union Southwest Regional Office, the American Association of Retired Persons, and Texas Legal Services join together to submit the following comments.

B. OVERALL APPROACH OF THE COMMENTS

At the Commission meeting on Project No. 14929 which reported out this item on universal service, Chairman Wood requested that parties present broad concepts and specific proposals for universal service that are not bound strictly by either the questions posed by the Commission or the restraints of PURA 95.

I would really like to expand the scope of this project from being just a rule writing and rule reviewing exercise to a global investigation of how to rethink and restructure universal service support mechanisms here in this state.

I think the questions should be a vehicle for parties to come back with some proposals that would be great, certainly proposals that would be consistent with PURA and consistent with the federal bill but also not be restricted by that. As I think you just mentioned, the Legislature is coming back in less than a year, and they have expressed to our staff who have met with them on a scope of competition report planning that they are interested in seeing a whole focus on universal service as one of the sections of that report.¹

¹Item No. 10, Project No. 14929 - The Commission will Consider for Publication Questions Regarding Universal Service., Transcript, Final Order Meeting, April 10, 1996, pp. 69-70.

Taking the invitation of the Chairman to heart, these comments first present a broad overview of a vigorous universal service policy for Texas. This overview is followed by empirical analyses of the current state of universal service in Texas. In response to the questions, we outline the ways in which the universal service policy fits under PURA 95.

We believe that there are perfectly reasonable economic and legal interpretations of PURA which would enable the Commission to achieve the model of universal service we advocate without raising basic service rates or otherwise radically altering the current rate structure. We also believe that some legislative changes would make it easier to accomplish the fundamental goals of universal service.

Furthermore, the introduction of competition into the industry provides the opportunity to broaden the base of the commitment to universal service so that a wider range of services is delivered to all people in Texas.

C. OUTLINE OF THE COMMENTS

Section II presents an overview of the universal service policy model we believe that the Commission should follow. Subsequent sections elaborate on the key elements of this vision of universal service.

Section III describes in detail empirical measures and definitions for the concepts of universal, affordable and service.

Section IV discusses the overall approach to ensuring affordability for all Texans. It focuses primarily on the issue of rate rebalancing and refutes the claims of the local exchange companies (LECs).

Section V takes up the issue of stranded investment.

Section VI discusses the impact that proposals for rate rebalancing would have on the cost of basic service.

Section VII describes targeted programs that should be established.

Section VIII addresses the question of how the proposed universal service policy fits under PURA 95 and what legislative changes are necessary to facilitate its implementation.

II. RETHINKING THE STRUCTURE OF UNIVERSAL SERVICE

A. THE GOAL

We believe that the discussion of universal service must start with a clear statement of the goals of public policy. What do we want to accomplish by declaring a public policy to achieve universal service? Designing programs to achieve universal service are only means to achieve an end, which must be clearly defined.

1. UNIVERSAL

Universal means just about everybody. While there are certainly a few people who do not want telephone service, just about everybody does want it. Empirical evidence discussed below in Section III shows that a goal of 98 percent is reasonable based on an analysis of household subscription patterns. It would be a grave mistake in public policy to allow the one or two percent of the people who do not want telephone service to obscure the clear fact that 98 or 99 percent of the people do want it.

2. AFFORDABLE

The central observation in arriving at the goal of serving just about everyone is that at income levels where the cost of service does not appear to be a problem, just about everyone takes it. Universality of service comes from the affordability of service. If people feel that they can afford it, they will take it.

However, when we speak of telephone service, which is deemed by society to be a necessity, simply being willing to pay for it does not define the nature of affordability. Because it is a necessity, we know that people can be forced to pay a great deal for it. They will suffer under the burden of such costs, and feel that the service is not really affordable even though they keep it.

The empirical evidence reviewed below shows that lower income households are forced to spend a much larger share of their income on telephone service than middle and upper income households. This burden places a strain on the household budgets of those who take telephone service and is one of the reasons that many low income households do not take service.

3. SERVICE

The purpose of ensuring basic service is to provide citizens with effective use of the telecommunications network to meet their needs. The key observation that underlies the definition of service from the public policy point of view is that it is perfectly reasonable, even necessary, that basic service will be defined differently at different points in time and for different groups of people. It is only natural that this would change as society changes or be somewhat different to meet the needs of individuals or institutions in very different circumstances.

Some functionalities or services that may be luxuries at one point in time become necessary to effective participation in society as these functionalities become more deeply embedded in the network and relied upon for daily social activities. As technological progress takes place, old ways of doing things fall by the wayside. Because they take too long or cost too much, they are deemed inadequate, even though a decade before they may have been the norm or even leading edge. As technological progress takes place, individuals require higher levels of functionality to survive economically. From this point of view, "necessary" is not defined by the simple technological possibility of providing service, but by the economic requirement to provide adequate and efficient service that is for the public convenience. Ironically, the more vigorous economic progress is, the more rapidly this evolution takes place.

Similarly, some population groups may not be able to use the telecommunications network if they are not provided with specific additional functionalities that may not be required by other segments of the population. Some people may be denied effective communications because the price is too high, relative to their income. Others may be denied effective communications because the design of the network is a barrier because it assumes that all people have the same functional abilities, which is not the case.

B. POLICIES TO ACHIEVE UNIVERSAL SERVICE

1. JUST AND REASONABLE RATES FOR ALL

The cornerstone of universal service policy has always been a commitment to rates that are just and reasonable. We know that telecommunications is a necessity and that people can

be forced to pay a great deal for it. However, for at least six decades, explicit public policy has insisted that rates be just and reasonable.²

Overall profit levels of firms providing this necessary service have been constrained to reasonable levels and individual rates charged to customers must not be discriminatory. Moreover, because the telecommunications network is used by a variety of classes of customers for a variety of different types of services, regulators have sought to keep the price of basic service affordable for residential ratepayers by spreading the joint and common costs of the network across all customers. They have insisted that all users and uses help to pay for facilities that they share. The allocation of costs has been controversial, sometimes based on the value of services rendered, sometimes based on the costs caused by the services, but it has generally sought to keep basic service priced at levels to ensure universal services.

We stress that the first principle of universal service is the delivery of service at rates that are just, reasonable and affordable for all ratepayers. We are convinced that policies to radically rebalance rates or restructure the revenue streams of local exchange service providers are unnecessary from the point of view of economic analysis and legal requirements and are contrary to the goal of achieving universal service as a matter of public policy.

The largest companies serving Texas have been among the most vigorous proponents of radical rate restructuring in federal and state proceedings and they are likely to view the

²The Federal Communications Commission (FCC) was created in the Communications Act of 1934

[f]or the purpose of regulating interstate and foreign commerce in communication by wire and radio so as to make available, so far as possible to all the people of the United States a rapid, efficient, Nation-wide, and world-wide wire and radio communications service with adequate facilities at reasonable charges."

universal service proceeding in Texas as an opportunity to guarantee their revenues against the impact of competition.³ These efforts must be rejected by the Commission under federal and state law.

2. TARGETED PROGRAMS

Beyond the fundamental commitment to just and reasonable rates for all consumers, public policy has long recognized the need for additional programs to ensure that specific groups would be able to use the network to meet their needs for communications. Three primary categories of customers have historically been identified -- those in high cost areas, low income households and consumers with disabilities.

Assistance to high cost areas -- particularly rural communities -- stretches back at least to the mid-1930s, when cooperatives were formed to provide telephone service in rural areas. In these communities, the cost of service is generally relatively high. The FCC also has had a program in place to help defray the costs of these areas for years. State assistance to high cost

³"Comments of Southwestern Bell Telephone Company," In the Matter of Federal-State Joint Board on Universal Service, CC Docket No. 96-45, April 12, 1996 (hereafter SWBT Initial Comments); "Reply Comments of Southwestern Bell Telephone Company, In the Matter of Federal-State Joint Board on Universal Service, CC Docket No. 96-45, May 7, 1996 (hereafter SWBT, Reply Comments); "Initial Comments of Southwestern Bell Telephone Company," In the Matter of the Rulemaking by the Oklahoma Corporation Commission to Establish Rules and Regulations concerning Universal Service, Before the Corporation Commission of the State of Oklahoma, Cause NO. RM 96000015, May 30, 1996 (hereafter, SWBT, Oklahoma); "GTE's Comments," In the Matter of Federal-State Joint Board on Universal Service, CC Docket No. 96-45, April 12, 1996 (hereafter GTE Initial Comments); "GTE's Reply Comments," In the Matter of Federal-State Joint Board on Universal Service, CC Docket No. 96-45, April 12, 1996 (hereafter, GTE Reply comments); "Comments on Notice of Proposed Rulemaking of GTE Southwest Corporation," In the Matter of the Rulemaking by the Oklahoma Corporation Commission to Establish Rules and Regulations concerning Universal Service, Before the Corporation Commission of the State of Oklahoma, Cause NO. RM 96000015, May 30, 1996 (hereafter, GTE Oklahoma).

areas has been public policy for decades and was made explicit in many states around the time of divestiture. It is, of course, an integral part of PURA 95.⁴

Assistance programs to low income households, or Lifeline programs, were instituted at the federal level in the mid-1980s, in conjunction with the imposition of the federal subscriber line charge. For these households, service may not cost any more than for other consumers, but their income is not adequate to allow the household to afford telephone service.⁵

Another category of consumers requiring targeted programs is consumers with disabilities. Accessibility for consumers with disabilities has been addressed in the form of a mandate for relay service. This service allows individuals with hearing or speech disabilities to use an intermediary to translate audio communication to textual communications (or vice versa). This federally mandated policy was also identified in PURA 95.⁶

The Telecommunications Act of 1996 identifies a new category of customers whose needs should be met with specific programs that go beyond just and reasonable rates. Public institutions in the 1996 Act constitute a new aspect of universal service policy. The needs of schools, health care providers and libraries are to be met in five different ways. PURA 95 also provides for discounted rates for these institutions.⁷

⁴Rules, 3.608(a), access rule.

⁵Southwestern Bell participates in the federal Lifeline and Link-Up programs and Texas Tele-assistance.

⁶Public Utility Regulatory Act (PURA) Tex.Rev.Civ.Stat.Ann. art.1446c (Vernon Supp. 1996), §3.604.

⁷PURA §3.359.

C. UNIVERSAL SERVICE FUNDS

The targeted programs of universal service -- high cost, low income, consumers with disabilities, and public institutions -- create the need for Universal Service Funds. In essence, these programs require discounts from the just and reasonable rates for all consumers. Discounts immediately raise two sets of issues -- how to determine who gets the discounts and how to pay for them.

1. DRAWING FROM THE FUND

These funds are designed to assist individuals who by reduced economic circumstance, geographic location, or physical limitation need assistance to achieve the basic level of communications which society aspires to provide to all of its members. We believe that the eligibility of individuals to draw from the fund should be inclusive and impose the least amount of administrative difficulty and social stigma possible. Furthermore, the funds should preserve consumer choice and consumer sovereignty to the maximum extent possible (they should be portable).

The Commission should rejected the notion that punitive and restrictive conditions be set on those eligible for the funds. The point is not to penalize people for their circumstances, but to meet their needs for communications. For example, in rural areas, where the Commission determines that the cost of service would be too high for individuals to bear, it makes no sense to allow a subsidy on the first line into a home, but not the second. If second lines are available at affordable rates in urban areas, then they should be in rural areas too.

Similarly, we do not believe it is fair to place restrictions on the services purchased by low income households. Adding call waiting may enhance the value of telephone service

dramatically. Low income households should not be prevented from adding this option at regular rates, if they are receiving Lifeline assistance.

High cost funds have traditionally been inclusive, covering all subscribers in areas that are designated to be high cost. Explicit funding mechanisms should be adopted to ensure that these programs continue. The Commission must exercise vigilance to ensure that rates remain just and reasonable in high cost exchanges.

2. COLLECTING THE FUND

Under the 1996 federal Act, subsidies must be made explicit. We believe that they should be explicitly charged to telecommunications service providers in a competitively neutral way. As long as all suppliers are assessed at a rate that reflects their telecommunications activities within the state, the fund will be competitively neutral and explicit. As long as all suppliers are allowed to draw from the fund in a manner that reflects the share of additional universal service fund costs that they bear (i.e. in proportion to the discounts that they actually give), the fund will be competitively neutral.

Thus, the contribution to universal service through discounted rates should be quantified with precision for each of the four targeted classes of customers -- high cost, low income, consumers with disabilities and public institutions.

The structure of the high cost fund is of special importance since the estimation of how much is to be drawn is not a simple calculation of the discount from a tariffed rate, but requires the estimation of costs and revenues in high cost areas. We believe that in order to properly administer high cost funds, costs must be carefully estimated and allocated between services and a variety of sources of revenues must be taken into account.

D. SUMMARY OF UNIVERSAL SERVICE POLICY ELEMENTS

In summary, we recommend the following general principle.

- The goal of universal service is to provide for all people in Texas effective means to meet their communications needs at rates that are just reasonable and affordable.
- Just, reasonable and affordable rates for all consumers should be based on reasonable profits and non-discriminatory rates, with common costs shared by all services that utilize common facilities. Affordable rates should not impose an economic burden on a family's household budget.
- Targeted programs for low income households, high costs areas, consumers with disabilities and public institutions should be inclusive, administratively simple, non-punitive and portable.
- Funding should be competitive neutral and broad-based in collection and competitively neutral in distribution.

III. UNIVERSAL SERVICE

In this section, we review the elements of the concept of universal service. The Commission's first question provides an appropriate starting point for specifying the goals of universal service policy.

1. HOW SHOULD UNIVERSAL SERVICE BE DEFINED? ARE THERE SIGNIFICANT DISTINCTIONS BETWEEN THE STATE AND FEDERAL DEFINITIONS THAT MUST BE RECOGNIZED OR HARMONIZED?

The new federal law will make a major change in the way universal service is defined and universal service policies are implemented.

A. THE NEW CONCEPT OF UNIVERSAL SERVICE

For most of the twentieth century universal service has been loosely defined, first by a general policy articulated by the dominant telephone company⁸ and later as language in the Communications Act of 1934, as further specified by state law.

As described in Table III-1, Section 254 of The Telecommunications Act of 1996 vastly expands the concept of universal service.⁹ Although it remains to be seen exactly how the Federal Communications Commission (FCC) ultimately defines universal service, the states are allowed under the law to go beyond the federal definition of universal service. Section 254(f) of the 1996 Act reserves the authority of the state to go beyond the federal definitions and programs as follows:

A state may adopt regulations not inconsistent with the Commission's rules to preserve and advance universal service. Every telecommunications carrier that provides intrastate telecommunications services shall contribute, on an equitable and nondiscriminatory basis, in a manner determined by the State to the preservation and advancement of universal service in that state. A State may adopt regulations to provide for additional definitions and standards only to the extent that such regulations adopt additional specific, predictable, and sufficient mechanisms to support such definitions or standards that do not rely on or burden Federal universal service support mechanisms.

⁸ In 1910 Theodore Vail, President of AT&T, articulated his vision of the future of the telephone industry (Cited in Herbert S. Dordick, "Toward a Universal Definition of Universal Service," Institute for Information Studies, Universal Telephone Service: Ready for the Twenty-First Century, 1991, p. 115) as follows.

The Bell system was founded on broad lines of "One System," "One Policy," "Universal Service" on the idea that no aggregation of isolated independent systems not under common control, however well built or equipped, could give the country the service. One system with a common policy, common purpose and common action; comprehensive, universal, interdependent, intercommunicating like the highway system of the country, extending from every door to every other door, affording electrical communication of every kind from every one and every place to every one at every other place.

⁹Telecommunications Act of 1996, Public L. No. 104-104, 110 Stat 56(1996) (hereafter, 1996 Act).

TABLE III-1:

THE UNIVERSAL SERVICE GOALS OF THE TELECOMMUNICATIONS ACT OF 1996

254(b) UNIVERSAL SERVICE PRINCIPLES - The Joint Board and the Commission shall base policies for the preservation and advancement of universal service on the following principles:

(1) QUALITY AND RATES. -- Quality services should be available at just, reasonable, and affordable rates.

(2) ACCESS TO ADVANCED SERVICES. -- Access to advanced telecommunications and information services should be provided in all regions of the country.

(3) ACCESS IN RURAL AND HIGH COST AREAS. -- Consumers in all regions of the Nation, including low-income consumers and those in rural, insular, and high cost areas, should have access to telecommunications and information services, including interexchange services and advanced telecommunications and information services, that are reasonably comparable to those services provided in urban areas at rates that are reasonably comparable to rates charged for similar services in urban areas.

(4) EQUITABLE AND NONDISCRIMINATORY CONTRIBUTIONS. -- All providers of telecommunications services should make an equitable and nondiscriminatory contribution to the preservation and advancement of universal service.

(5) SPECIFIC AND PREDICTABLE SUPPORT MECHANISMS. -- There should be specific, predictable and sufficient Federal and State mechanisms to preserve and advance universal service.

(6) ACCESS TO ADVANCED TELECOMMUNICATIONS SERVICES FOR SCHOOLS, HEALTH CARE, AND LIBRARIES. -- Elementary and secondary schools and classrooms, health care providers, and libraries should have access to advanced telecommunications services as described in subsection (h).

(7) ADDITIONAL PRINCIPLES. -- Such other principles as the Joint Board and the Commission determine are necessary and appropriate for the protection of the public interest, convenience, and necessity and are consistent with this Act.

254 (i) CONSUMER PROTECTION. - The Commission and the States should ensure that universal service is available at rates that are just, reasonable, and affordable.

It is clear that the new law has expanded the concept and interjected federal policy more directly into a national definition of universal service.

The FCC is charged with assuring that all rates for universal service are just, reasonable, and affordable, not just the rates for interstate services. The word affordable had not been used before, but the 1996 Act introduces the concept of affordability directly and explicitly into national policy. The 1996 Act expands the services to which the universal service concept applies and institutes a formal process for expanding the definition of universal service over time.

Although access to the network for high cost areas and low-income consumers has been supported for years, the 1996 Act explicitly requires this policy and requires that it be implemented with specific and predictable mechanisms, in the form of contributions from all providers of telecommunications services, to support universal service. The 1996 Act also expands this policy by seeking to ensure the availability of comparable services at comparable rates in high cost areas.

Service for consumers with disabilities is recognized in the 1996 Act in a much broader way than it had been (see Table III-2 shows). The 1996 Act brings forward language from the Americans With Disabilities Act and adds greater specificity for the telecommunications industry.

TABLE III-2

SECTION 255. ACCESS BY PERSONS WITH DISABILITIES -

(b) **MANUFACTURING** - A manufacturer of telecommunications equipment or customer premise equipment shall ensure that the equipment is designed, developed, and fabricated to be accessible to and usable by individuals with disabilities, if readily achievable.

(c) **TELECOMMUNICATIONS SERVICES** - A provider of telecommunications services shall ensure that the service is accessible to and usable by individuals with disabilities, if readily achievable.

(d) **COMPARABILITY** - Whenever the requirements of subsections (b) and (c) are not readily achievable, such a manufacturer or provider shall ensure that the equipment or service is compatible with existing peripheral devices or specialized customer premise equipment commonly used by individuals with disabilities to achieve access, if readily achievable.

A wholly new area of federal policy has been opened with the identification of public institutions as targets of both universal service policy and recipients of advanced services at discounted rates. First, whatever steps are taken to ensure affordability of the core services included in basic service are also to be made available to these institutions. Second, the FCC can identify additional services which may be considered core services for these institutions alone. Third, health care providers in rural areas are entitled to receive services, upon the filing of a bona fide request, at rates which are similar to those at which the services are provided in urban areas. Fourth, schools and libraries are entitled to receive a discount on any core services which fall under the definition of universal service. Fifth, public institutions may receive

preferential access to advanced services as the result of the charge to the FCC to establish competitively neutral rules -

(A) to enhance, to the extent technically feasible and economically reasonable, access to advanced telecommunications and information services...; and

(B) to define the circumstances under which a telecommunications carrier may be required to connect its network to such public institutional telecommunications users.

B. THE CONCEPT OF SERVICE

Since the new federal law clearly expands the concept of universal service to apply to more than just telephone service, the FCC has chosen to talk about core services that fall under the definition of (i.e. are to supported as part of) universal service.

As Table III-3 shows, the list of potential services for inclusion under the umbrella of basic service has become quite long at the state level. Each of the services or functionalities on the list has been included in the definition of basic service by one or more states and has received at least some support in the federal universal service proceeding.¹⁰

For specific groups, additional services have been included under the general policy of promoting universal service. Several states include additional functionalities at reduced charges

¹⁰"In the Matter of Federal-State Joint Board on Universal Service," Notice of Proposed Rulemaking and Order Establishing Joint Board, CC Docket No. 96-45, Federal Communications Commission, FCC No. 96-93, Fed. Reg. 61 10499, March 8, 1996.

TABLE III-3:
COMPONENTS OF BASIC SERVICE FOR VARIOUS GROUPS

Services and Functionalities Included in Basic Service
For All Subscribers

Single party service
Voice grade
Local Usage
Touch-tone
Toll blocking
Directory listing
Long distance equal access
E-911
Relay service
Operator Assistance Access
Directory Assistance (411)
Fax capability
Data capability (at specified speed)
Connectivity to all telecommunications
900 number blocking
Per line Caller ID blocking

Additional Services and Functionalities for Low Income Households at a Discount

Long distance discount plans
Operator Assistance (certain functions unbilled)
Call intercept

Services and Functionalities to Ensure Access for Consumers with Disabilities

Customer premise equipment
 Voucher for purchase
 Rental at cost
Discount connectivity services
 Long distance discount for TTY users
 Free operator assisted dialing
 Expanded unbilled directory assistance
 Free essential custom calling features

for low income households. These are functionalities that non-low income households might purchase optionally because they are deemed important for health and safety or other reasons. Universal service policy seeks to ensure that low income households are not denied access to these functionalities because of their lack of resources.

Similarly, disabled consumers may require additional functionalities to access the network or to use it in an affordable way. For example, speed dialing capabilities may be deemed necessary to give persons with motor disabilities effective access to the network. Discounted usage rates may be necessary to allow TTY users, whose communications process is slowed by relay services, to place long distance calls at affordable rates.

Although this list of services may seem long, much of it is built into the network at relatively low incremental costs. We recommend that the Commission include all of the elements listed in Table III-3 in its definition of universal service.

C. THE CONCEPT OF AFFORDABILITY

The Commission's second question asks for a definition and measurement of affordability, which we have suggested is the underlying mechanism to achieve universal service.

Only by making service truly affordable will it become universal.

2. IF UNIVERSAL SERVICE SUPPORT MECHANISMS ARE INTENDED TO PROVIDE BASIC SERVICE AT AFFORDABLE RATES, HOW SHOULD "AFFORDABLE" BE DEFINED AND MEASURED?

1. DEFINITION

Under the federal law the concept of "affordable" enters federal public policy for the first time. The definition of affordable in several recent editions of the dictionary is as follows.

(1) (a) To manage to bear without serious detriment; (b) To be able to bear the cost of.¹¹

(1) To be able to undergo, manage, or the like without serious consequence; (2) to be able to meet the expense of or spare the price of.¹²

Clearly there are two aspect to the concept of affordability. The first definition ("bear the cost of without serious detriment or consequence") is relative in the sense that the burden imposed is qualified by the term "serious inconvenience, consequence or detriment." If it hurts a lot to pay for telephone service, telephone service is not deemed to be affordable, even though the subscriber continues to pay for it.

The second definition ("have enough or the means for") is an absolute concept in the sense that there is no qualifier. No matter how much it hurts, if a subscriber continues to pay for telecommunications service, telephone service is deemed by implication to be affordable.

Thus, the relative connotation of affordability seems to be the primary connotation. The standard is not whether one can pay the price, but whether that price causes serious detriment or consequence. For this reason, public policy should reject a narrow definition of universal service as simple access to the phone because the telephone is a necessity and people will cling to it.

Even if households do not drop off the network, we must still ask whether they are able to use the phone as the basic means of communication at the end of the twentieth century. For the past half century we have woven the phone into the fabric of daily life. We have let

¹¹Merriam Webster's Collegiate Dictionary, Tenth Edition (1995), p. 36

¹²Random House Webster's College Dictionary (Random House, Hew York; 1995), p. 24.

decisions about where to live, where to locate services, how to acquire information, and how to allocate our time be fundamentally influenced by the ease of access to unlimited local calls. The telephone has become the mainstay of daily communications. It does not suffice to say that if a household has a phone it must be affordable, regardless of how much of a burden it places on the household budget. Affordability is more complex than that. In this context the test of affordability is not simply whether or not people keep the phone, or whether or not they use it, but how much of a burden a decent level of consumption of this vital necessity places on the household budget.

2. MEASUREMENT

Keeping in mind the two facets of universal service -- the relative burden on the customer and the absolute level of service -- empirical measures indicate that while Texas has made great progress toward universal service, it has not yet been achieved.

Quantitative measures of the relative burden on customers involve estimating the percentage of income that households might be forced to spend for service at various income levels and rate levels (*e.g.*, the Consumer Expenditure Survey compiled by the Bureau of Labor Statistics).¹³ Qualitative measures would include determining what people consider "too expensive" or "too much" to pay for telephone service. Examples of this measurement are

¹³McMaster, Susan E. and James Lande, Reference Book: Rates, Price Indexes, and Household Expenditures for Telephone Service (Industry Analysis Division, Common Carrier Bureau, Federal Communications Commission, November 1995).

levels of satisfaction and dissatisfaction with rates expressed in response to questions asked in opinion polls.¹⁴

Quantitative measures of the absolute level of service include penetration rates (as compiled by the Current Population Survey conducted by the Bureau of the Census). We can also find qualitative measures, where people are asked why they do not have or have given up telephone service. Examples of this measurement include the national study conducted by the American Association of Retired Persons and the Consumer Federation of America,¹⁵ as well as the LBJ School of Public Affairs study.¹⁶

D. UNIVERSAL SERVICE IN TEXAS

In order to examine the two aspects of affordability in Texas, we have combined data on telephone subscription from the Current Population Survey and rate surveys from late 1994 to demonstrate the two aspects of affordability. We estimate that the average monthly bill in Texas is \$14.57 (see Table III-4). The average rate of \$14.57 is for basic monthly service, which includes the local monthly recurring charge, the federal subscriber line charge, and an estimate of taxes and 911 charges, all of which must be paid in order to obtain service.

¹⁴"Direct Testimony of Dr. Mark N. Cooper on Behalf of the American Association of Retired Persons," Comprehensive Review of the Revenue Requirement and Rate Stabilization Plan of Southern Bell Telephone and Telegraph Company, Florida Public Service Commission, Docket No. 900960-TL, November 2, 1992.

¹⁵Mark N. Cooper, The Telecommunications Needs of Older, Low Income and General Consumers in the Post-Divestiture Era (American Association of Retired Persons and the Consumer Federation of America, October, 1987).

¹⁶ John B. Horrigan and Lodis Rhodes, The Evolution of Universal Service in Texas (LBJ School of Public Affairs, The University of Texas at Austin, September, 1995).

Table III-5 shows the percentage of households at various income levels that do not subscribe to telephone service and the percentage of income that basic service charges represents for households with telephone service. Among households with income below \$5,000 we observe that almost one-third (32 percent) do not have telephone service. A household with an income of \$2,500, would be forced to pay 7 percent of that income to obtain service.

For those with incomes between \$5,000 and \$7,500, over one-quarter do not have telephone service. The percentage of income required to obtain basic service for this group is about 2.8 percent at the \$7,500 level.

For those with incomes between \$7,500 and \$15,000, about 15 percent of households do not have telephone service. Basic service costs over 1 percent of income.

The percentage of households without telephone service falls rapidly as income rises above this level. By the time income reaches the range of \$20,000 to \$25,000 the percentage of households with telephone exceeds 95 percent. From this point upward on the income distribution, penetration remains in the 95 to 100 percent range. For groups with incomes above \$20,000 the percentage of income required for basic service is below 1 percent.

Telephone penetration reaches 97 percent when its cost is about .7 percent of income. Based upon this data, we can suggest a rule of thumb for affordability measured as penetration and burden. First, since we observe that at moderate levels of income 95 to 100 percent of all households have telephone service, it is reasonable to assume that if the cost of service were not a burden, 95 to 100 percent of all households would have service. We are not talking about rich people exclusively, since this percentage is observed among the middle class as well (households with incomes above \$20,000).